GTR / IGER seminar　アドバンス生命理学特論

Connectomics of the *Drosophila* brain
using three-dimensional electron microscopy

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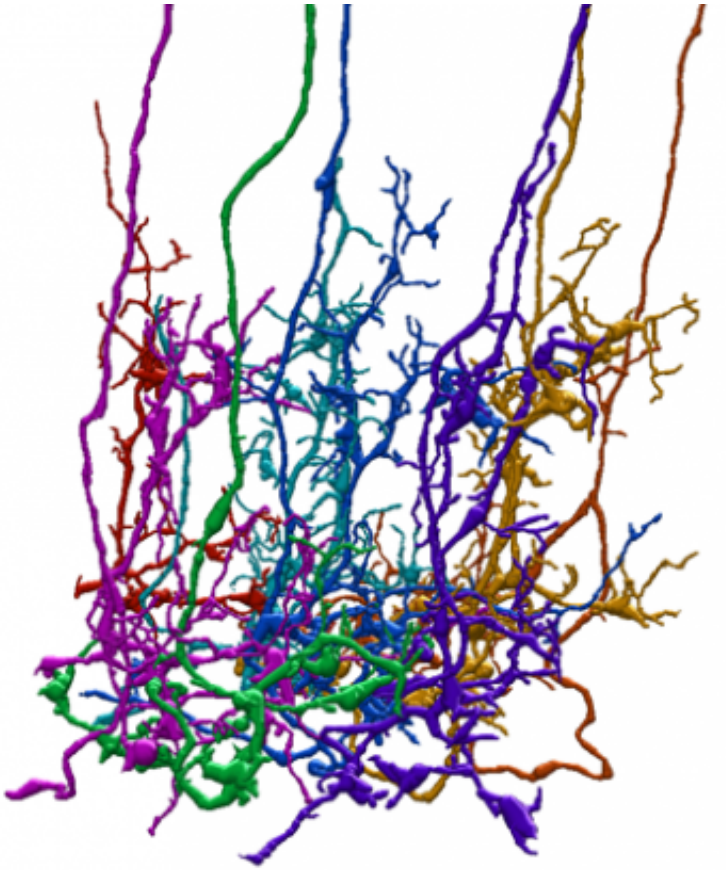
The brain of the fruit fly, *Drosophila melanogaster*, has been used as a model system in connectome studies because of its small size and variation of available experimental techniques. We are investigating neuronal circuits in the fly brain at the synapse level and reconstructing neurons using a 3D-EM method called FIB-SEM (focused ion beam-aided scanning electron microscopy). I have been focusing on pathways in the optic lobe, the lower-order visual center, and comprehensively reconstructed synaptic circuits detecting motion information. Technical and biological significances of the work will be explained. Other efforts being carried out in our team, especially a large-scale connectome project of an entire hemisphere of the fly brain ("the hemibrain"), will also be introduced.



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